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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,919	09/05/2003	Alan Blair	1010.8144UU	8612

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CARLSON, CASPERS, VANDENBURGH & LINDQUIST
225 SO. 6TH STREET
SUITE 3200
MPIS, MN 55402

EXAMINER	
LIU, LI	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SF

Office Action Summary	Application No.	Applicant(s)	
	10/656,919	BLAIR ET AL.	
	Examiner	Art Unit	
	Li Liu	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 September 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/05/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on September 5, 2003 has been considered by the examiner.

Cross-Reference

2. The application claims benefit of 60/409,921 filed on 09/10/2002. Applicant should include Cross-References to Related Applications in the specification. See 37 CFR 1.78 and MPEP § 201.11.

Drawings

3. The drawings are objected to because the reference number 322 should point to the solid line optical path, not point to the polarization rotator 306; the reference number 204 should point to the collimator block.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 224 in Figure 2 (page 7 line 28); 416a and 416b in Figure 4 (page 11 line 26-27).

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as

either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities:

1). Page 16, line 3, the "mounting surface **518**" should be changed to "mounting surface **618**".

2). Page 17, line 2, the "non-reciprocal element **712**" should be changed to "non-reciprocal element **710**"

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-6 and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng (US 5,661,829) in view of Andersen (US 6,404,566).

1). With regard to claim 1, Zheng discloses an optical isolator device (Figure 2) for use in a predetermined temperature range, comprising:

an isolator arrangement (Figure 2) of at least a first birefringent crystal (132 in Figure 2), a non-reciprocal element (134 in Figure 2) and a second birefringent crystal (136 in Figure 2).

Zheng discloses a mount (core assembly holder 138 in Figure 2). But Zheng does not discloses: (A) the mount having a first mounting surface provided with a first protruding contact region; (B) at least one of the first birefringent crystal, the non-reciprocal element and the second birefringent crystal having a second mounting surface contacting the protruding contact region; and (C) adhesive attachingly disposed between portions of the first and second mounting surfaces not in mutual contact.

With regard to item (A), Andersen, in the same field of endeavor, discloses a mount having a first mounting surface (the surface is determined by the protrusions 104, Figure 5) provided with a first protruding contact region (104 in Figure 4-8);

With regard to item (B), Andersen discloses that an optical element having a second mounting surface (20 in Figure 5) contacting the protruding contact region (104 in Figure 5); and

With regard to item (C), Andersen discloses adhesive (110 in Figure 7) attachingly disposed between portions of the first and second mounting surfaces not in mutual contact (Figure 7 and Figure 9).

Andersen's mount with protrusions ensures accurate alignment and improves the stability of the mounted optical element (column 4 line 5-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the mount with protrusions taught by Andersen to

the core assembly holder of Zheng so that an accurate alignment is ensured, and the performance and the stability of the mounted optical element is improved.

2). With regard to claims 2 and 3, Zheng and Andersen disclose all of the subject matter as applied in claim 1 above. Zheng further discloses a third mounting surface (the left side of the second birefringent crystal 136 in Figure 4), a fourth mounting surface of the mount (the right side of the two elongated or raised members of the core assembly core 138 in Figure 4), a fifth mounting surface (the right side of the birefringent crystal 132 in Figure 4) and a sixth mounting surface of the mount (the left side of the core assembly holder 138 in Figure 4).

But, Zheng fails to teach the second and third protruding regions of mounting surfaces of the mount and the adhesive attachingly disposed between the mounting surfaces and the mount.

However, Andersen teaches a mount with protruding contact region (104 in Figure 5); and adhesive (110 in Figure 7) attachingly disposed between portions of the first and second mounting surfaces not in mutual contact (Figure 7 and Figure 9).

Andersen's mount with protrusions ensures accurate alignment and improves the stability of the mounted optical element (column 4 line 5-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the mount with protrusions taught by Andersen to the core assembly holder of Zheng so that an accurate alignment is ensured, and the performance and the stability of the mounted optical element is improved.

3). With regard to claims 4 and 5, Zheng and Andersen disclose all of the subject matter as applied in claims 1 and 2 above. Zheng further discloses wherein one side of

the mount (138 in Figure 4) is provided with at least two raised members (the two elongated or raised members of the core assembly holder 138 in Figure 4), and the non-reciprocal element (134 in Figure 4) mounted to the mount in a region between the at least two raised members (the polarization rotator 134 is within the core assembly holder 138), and the two raised members are arranged to permit the non-reciprocal element to be translated between the two of the at least two raised members and mounted over a through aperture in the mount (Figure 4, the dotted lines show the through aperture, column 5 line 21-24).

But Zheng fails to teach the protruding regions on ends of the at least two raised members forming the second protruding region.

However, Andersen teaches a mount with protruding contact region (104 in Figure 5); and adhesive (110 in Figure 7) attachingly disposed between portions of the first and second mounting surfaces not in mutual contact (Figure 7 and Figure 9).

Andersen's mount with protrusions ensures accurate alignment and improves the stability of the mounted optical element (column 4 line 5-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the mount with protrusions taught by Andersen to the core assembly holder of Zheng so that an accurate alignment is ensured, and the performance and the stability of the mounted optical element is improved.

4). With regard to claim 6, Zheng and Andersen disclose all of the subject matter as applied in claim 1 above. But Zheng does not disclose the adhesive remains under tension for temperatures within the predetermined temperature range.

However, Andersen teaches that the adhesive remains under tension for temperatures within the predetermined temperature range (column 4, line 1-5).

5). With regard to claim 8-12, Zheng and Andersen disclose all of the subject matter as applied in claim 1 above. And Zheng further discloses a light transmission aperture of the mount (Figure 4, the dotted lines show the through aperture, column 5 line 21-24).

But Zheng does not disclose: (A) the protruding contact region is disposed at least partially around a light transmission aperture of the mount to define the mounting plane; (B) the protruding contact tip region includes at least three individual contact tips on the mounting surface to define a mounting plane; (C) the adhesive is a thermally cured epoxy; (D) the adhesive has a thermal expansion coefficient higher than a thermal expansion coefficient of the mount and than a thermal expansion coefficient of the at least the first birefringent crystal, the non-reciprocal element and the second birefringent crystal; (E) the mounting surface further includes a well proximate the protruding contact tip region.

However, Andersen teaches: (A) a protruding contact region (104 in Figure 5) and (B) at least three individual contact tips on the mounting surface to define a mounting plane (more than two protrusions are used to receive a single optical element, column 3 line 62-63, so the mounting plane is determined by the protrusions), and (C) the adhesive is a thermally cured epoxy (column 3 line 2-5); the adhesive is a thermally cured epoxy (column 2 line 18-19); (D) the adhesive has a thermal expansion coefficient higher than a thermal expansion coefficient of the mount and than a thermal expansion coefficient of the optical elements (Andersen teaches that with a proper drying

temperature, the adhesive material system preferably will tend to decrease its volume through curing and cooling, thereby forcing the optical element into state of tension; therefore, the adhesive material must has a thermal expansion coefficient than a thermal expansion coefficient of the mount and a thermal expansion coefficient of the optical elements so to provide the state of tension); (E) the mounting surface further includes a well proximate the protruding contact tip region (108 and 112 in Figure 4, column 3 line 7-9).

Andersen's mount with protrusions and the thermal cure as well as the well ensures accurate alignment and improves the stability of the mounted optical element (column 4 line 5-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the mount with protrusions taught by Andersen to the core assembly holder of Zheng so that an accurate alignment is ensured, and the performance and the stability of the mounted optical element is improved.

6). With regard to claim 13, Zheng and Andersen disclose all of the subject matter as applied in claim 1 above. And Zheng further discloses wherein the isolator arrangement (130 in Figure 2) is disposed in a collimated light beam path between first (120 in Figure 2) and second collimator units (140 in Figure 2).

7). With regard to claim 14, Zheng and Andersen disclose all of the subject matter as applied in claim 1 above. And Zheng further discloses wherein the first and second collimator units are single fiber collimator units (one input fiber 121 and one output fiber 141 in Figure 2).

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng (US 5,661,829, hereinafter Zheng '829) and Andersen (US 6,404,566) as applied to claim 1 above, and in further view of Zheng (US 6,148,126, hereinafter Zheng '126).

Zheng (Zheng '829) and Andersen disclose all of the subject matter as applied in claim 1 above. But Zheng (Zheng '829) and Andersen do not disclose wherein the predetermined temperature range lies within the range -20.degree. C. to 75.degree. C.

However, Zheng (Zheng '126) discloses a heat-curing epoxy (column 3, line 19-21), which shows improved bonding strength and resistant to high temperature and humidity, and the heating for the heat-curing bonding epoxy at above 85 ° C.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the heat-curing epoxy taught by Zheng (Zheng '126) to the system of Zheng (Zheng '829) and Andersen so to provide improved bonding strength and temperature resistance, and then to provide the required temperature range of -20 ° C. to 75 ° C.

10. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng (US 5,661,829) and Andersen (US 6,404,566) as applied to claim 1 above, and in further view of Pan et al (US 6,198,858).

Zheng and Andersen disclose all of the subject matter as applied in claims 1 and 13 above. But Zheng and Andersen do not disclose wherein the first collimator unit is a dual fiber collimator unit and the second collimator unit is a single fiber collimator unit, and a filter disposed between the dual fiber collimator unit and the single fiber collimator unit, the isolator arrangement being disposed between the filter and the single fiber collimator unit.

However, Pan et al, in the same field of endeavor, discloses an isolator arrangement wherein the first collimator unit is a dual fiber collimator unit (dual fiber 30 and 31 in Figure 3, and 70 and 71 in Figure 10 and Figure 11) and the second collimator unit is a single fiber collimator unit (a single fiber 72 in Figure 10 and 11), and a filter (44 in Figure 11 and 12, and column 4 line 21, and column 9 line 26) disposed between the dual fiber collimator unit and the single fiber collimator unit, the isolator arrangement being disposed between the filter and the single fiber collimator unit (Figure 10 and 13).

The couplers and isolators disclosed by Pan et al provide for advanced fiberoptic systems of higher performance, lower cost and superior reliability (column 2 line 31-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the isolator arrangement with a dual fiber collimator taught by Pan et al to the system of Zheng and Andersen so that the stability and reliability of the mounted optical element is improved, the lost is reduced, and the system performance is enhanced.

11. Claims 17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephens (US 2004/0161237) in view of Zheng (US 5,661,829) and Andersen (US 6,404,566).

1). With regard to claim 17, Stephens discloses an optical system, comprising:

an optical transmitter (TX 14 in Figure 1(b)) producing output light;

an optical receiver receiving (Rx 16 in Figure 1(b)) at least a portion of the output light; and

an optical fiber link (18 in Figure 1) coupling between the optical transmitter and the optical receiver, the optical fiber link including a fiber isolator device (36 in Figure 3(a) and (b)).

But, Stephens does not explicitly discloses: (A) the isolator device has an isolator arrangement of at least a first birefringent crystal, a non-reciprocal element and a second birefringent crystal forming an isolator unit; (B) a mount having a first mounting surface provided with a first protruding contact region; (C) at least one of the first birefringent crystal, the non-reciprocal element and the second birefringent crystal having a second mounting surface contacting the protruding contact region; and (D) adhesive attachingly disposed between portions of the first and second mounting surfaces not in mutual contact.

With regard to item (A), Zheng discloses an isolator arrangement (Figure 2) of at least a first birefringent crystal (132 in Figure 2), a non-reciprocal element (134 in Figure 2) and a second birefringent crystal (136 in Figure 2).

Zheng's isolator arrangement has an enhanced performance (column 2 line 29-30) and less cost (column 5 line 24-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the isolator taught by Zheng to the system of Stephens so that the system performance is enhanced and the lost is reduced.

With regard to item (B), Andersen, in the same field of endeavor, discloses a mount having a first mounting surface (the surface is determined by the protrusions 104, Figure 5) provided with a first protruding contact region (104 in Figure 4-8);

With regard to item (C), Andersen discloses that an optical element having a second mounting surface (20 in Figure 5) contacting the protruding contact region (104 in Figure 5); and

With regard to item (D), Andersen discloses adhesive (110 in Figure 7) attachingly disposed between portions of the first and second mounting surfaces not in mutual contact (Figure 7 and Figure 9).

Andersen's mount with protrusions ensures accurate alignment and improves the stability of the mounted optical element (column 4 line 5-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the mount with protrusions taught by Andersen to the core assembly holder of Zheng so that an accurate alignment is ensured, and the stability of the mounted optical element is improved, and the performance of the transmission system can be enhanced.

2). With regard to claim 19, Stephens in view of Zheng and Andersen disclose all of the subject matter as applied in claim 17 above. And Stephens further discloses the system comprises one or more optical amplifier units 19 in Figure 1(b) disposed on the optical fiber link between the optical transmitter and the optical receiver.

3). With regard to claim 20, Stephens in view of Zheng and Andersen disclose all of the subject matter as applied in claim 17 above. And Stephens further disclose wherein the optical transmitter (14 in Figure 1(b) includes modulated light sources operating at different wavelengths ([0027]) and optical combining elements (21 in Figure 1(b)) to combine outputs from the modulated light sources into a fiber output coupled to the optical fiber link.

4). With regard to claim 21, Stephens in view of Zheng and Andersen disclose all of the subject matter as applied in claim 17 above. And Stephens further discloses wherein the optical receiver includes optical separating elements (23 in Figure 1(b)) to separate different wavelengths of light received from the optical fiber link and to direct light at different wavelengths to respective detectors ([0027]).

5). With regard to claim 22, Stephens in view of Zheng and Andersen disclose all of the subject matter as applied in claim 17 above. And Stephens further disclose the system comprises an optical add/drop multiplexer (12 in Figure 1(b) disposed on the optical fiber link.

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stephens (US 2004/0161237) and Zheng (US 5,661,829) and Andersen (US 6,404,566) as applied to claim 17 above, and in further view of Pan et al (US 6,198,858).

Stephens in view of Zheng and Andersen disclose all of the subject matter as applied in claim 17 above. And Zheng discloses wherein the fiber isolator device includes two fiber collimator units (120 and 140 in Figure 2), the isolator arrangement (130 in Figure 2) being disposed between the two collimator units,

But Stephens and Zheng and Andersen do not disclose wherein the fiber isolator device further comprises a filter disposed between the two collimator units.

However, Pan et al, in the same field of endeavor, discloses an isolator arrangement wherein a filter (44 in Figure 11 and 12, and column 4 line 21, and column 9 line 26) disposed between the two collimator units.

The couplers and isolators disclosed by Pan et al provide for advanced fiberoptic systems of higher performance, lower cost and superior reliability (column 2 line 31-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the filter taught by Pan et al to the system of Stephens and Zheng and Andersen so that the stability and reliability of the mounted optical element is improved, the lost is reduced, and the system performance is enhanced.

13. Claims 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen (US 6,404,566) in view of Zheng (US 5,661,829).

1). With regard to claim 23. Andersen discloses a method of mounting optical elements to a mount for use in a predetermined temperature range (column 4 line 1-5), the mount having a first protruding contact region (104 in Figure 4-8) on a mounting surface, the method comprising:

providing adhesive (110 in Figure 6-7) between the optical element and the mount (Figure 6-7);

pressing the optical element into contact with the first protruding contact region thereby substantially expelling the adhesive from between the optical element and the first protruding contact region (Figure 9); and

curing the adhesive at a temperature exceeding the predetermined temperature range (Figure 9 and column 4 line 1-5).

But, Andersen does not discloses that the optical elements are for an optical isolator, and the isolator has an arrangement that includes at least a first birefringent crystal, a non-reciprocal element and a second birefringent crystal.

However, Zheng discloses an isolator arrangement (Figure 2) including at least a first birefringent crystal (132 in Figure 2), a non-reciprocal element (134 in Figure 2) and a second birefringent crystal (136 in Figure 2).

Zheng's isolator arrangement has an enhanced performance (column 2 line 29-30) and less cost (column 5 line 24-25). Andersen's mount with protrusions ensures accurate alignment and improves the stability of the mounted optical element (column 4 line 5-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the isolator taught by Zheng with the mounting of Andersen so that an accurate alignment is ensured, the stability of the mounted optical element is improved, the lost is reduced, the system performance is enhanced.

2). With regard to claims 24, 25 and 26, Andersen and Zheng disclose all of the subject matter as applied in claim 23 above. And Andersen further discloses that the method thus described can be repeated as many times as necessary to mount all the required optical elements (column 4 line 8-9).

But, Andersen does not explicitly discloses that the optical elements are for optical isolator, and does not explicitly discloses to press a second optical element against a second protruding contact region of the mount to expel adhesive from between the second optical element and the second protruding contact region, and to press a third optical element against a third protruding contact region of the mount to expel adhesive from between the third optical element and the third protruding contact region.

However, Zheng discloses an optical isolator arrangement with three optical elements (the first birefringent crystal 132, the non-reciprocal element 134 and the second birefringent crystal 136 in Figure 2), and a core assembly (138 in Figure 2) with

a light transmission aperture (Figure 4, the dotted lines show the through aperture, column 5 line 21-24).

Since Andersen discloses that the method of mounting with protrusions thus described can be repeated as many times as necessary to mount all the required optical elements (column 4 line 8-9) and Zheng discloses a core assembly (138 in Figure 2) and three optical elements (the first birefringent crystal 132, the non-reciprocal element 134 and the second birefringent crystal 136 in Figure 2), it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the isolator arrangement taught by Zheng with the mounting method of Andersen so to adhere the three elements together, and then an accurate alignment of the isolator is ensured, the stability of the mounted optical element is improved, the lost is reduced, and the system performance is enhanced.

3). With regard to claim 27, Andersen and Zheng disclose all of the subject matter as applied in claim 23 above. And Andersen further discloses wherein providing the mount with a protruding contact region includes providing at least three individual contact tips on the mounting surface to define a mounting plane (more than two protrusions are used to receive a single optical element, column 3 line 62-63, so the mounting plane is determined by the protrusions).

4). With regard to claim 28, Andersen and Zheng disclose all of the subject matter as applied in claim 23 above. And Andersen further discloses wherein providing the adhesive includes providing a thermally curing epoxy (column 2 line 18-19) between the at least one of the first birefringent crystal, the non-reciprocal element and the second birefringent crystal and the mount.

5). With regard to claim 29, Andersen and Zheng disclose all of the subject matter as applied in claim 23 above. And Andersen further discloses that the method further comprises curing the adhesive (Figure 9) between the mounting surface and the optical elements while the protruding contact region contacts the optical elements (column 4 line 1-5 and Figure 9).

6). With regard to claim 30, Andersen and Zheng disclose all of the subject matter as applied in claim 23 above. And Andersen further discloses wherein, after curing, the adhesive remains under tension for temperatures within the predetermined temperature range (column 4 line 1-5).

7). With regard to claim 31, Andersen and Zheng disclose all of the subject matter as applied in claim 23 above. And Andersen further discloses wherein providing the adhesive includes providing thixotropic adhesive (column 3, line 23-27).

8). With regard to claim 32, Andersen and Zheng disclose all of the subject matter as applied in claim 23 above. But Andersen does not discloses the method further comprises translating the non-reciprocal element in a direction perpendicular to an axis of the mount, between two raised members, and adhering the non-reciprocal mount over a light aperture of the mount.

However, Zheng discloses a core assembly holder with two raised member (the two elongated members of the core assembly holder 138 in Figure 4), and the two raised members are arranged to permit the non-reciprocal element to be translated between the two of the at least two raised members and mounted over a light aperture of the mount (Figure 4, the dotted lines show the through aperture, column 5 line 21-24).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Qing Liu et al (US 6,798,949) discloses an optical assembly with integrated lens protrusion.

Yu Zheng (US 6,185,347) discloses a wavelength division multiplexed coupler with collimator units and isolator.

Kitamura et al (US 6,741,406) discloses a lens assembly with protrusions.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Liu whose telephone number is (571)270-1084. The examiner can normally be reached on Mon-Fri, 7:30 am - 5:00 pm, alternating Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Li Liu
September 19, 2006

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER